

WHAT IS CLAIMED IS:

1. A method for fermentative production of S-adenosylmethionine (SAM), which comprises

culturing a bacterial strain obtainable from a starting strain and having increased SAM-synthetase activity, compared to said starting strain, in a culture medium,

said bacterial strain secreting SAM into said culture medium and said SAM being removed from said culture medium.

2. The method as claimed in claim 1,

wherein the bacterial strain used is a strain of the family *Enterobacteriaceae*.

3. The method as claimed in claim 1,

wherein the bacterial strain used is a strain of the genus *Escherichia*.

4. The method as claimed in claim 1,

wherein the SAM synthetase used is a protein comprising the sequence (SEQ ID NO: 1).

5. The method as claimed in claim 1,

wherein the SAM synthetase used is a protein comprising a functional variant whose sequence similarity to (SEQ ID NO: 1) is greater than 40%.

6. The method as claimed in claim 1,

wherein the SAM synthetase used is a protein comprising a functional variant whose sequence similarity to (SEQ ID NO: 1) is greater than 60%.

7. The method as claimed in claim 1,

wherein the SAM synthetase used is a protein comprising a functional variant whose sequence similarity to (SEQ ID NO: 1) is greater than 80%.

8. The method as claimed in claim 1, comprising

culturing the bacterial strain in a minimal salt medium.

9. The method as claimed in claim 1,

wherein a carbon source is used and is selected from the groups consisting of glucose and glycerol.

10. The method as claimed in claim 1,

wherein a nitrogen source is used and is selected from the group consisting of urea, ammonia, ammonia salts, and nitrate salts.

11. The method as claimed in claims 1, comprising

incubating the bacterial strain under aerobic culturing conditions over a period of 16-150 h and in the range of the growth temperature optimal for the particular bacterial strain.

12. The method as claimed in claims 1,

wherein L-methionine is added to the minimal salt medium.

13. The method as claimed in claims 1,

wherein L-methionine is added to the minimal salt medium at a concentration of between 0.05 and 25 g/l.

14. The method as claimed in claims 1,

wherein L-methionine is added to the minimal salt medium at concentration of between 1 and 5 g/l.

15. The method as claimed in claim 1,

wherein D,L-methionine is added to the minimal salt medium.

16. The method as claimed in claim 1,

wherein D,L-methionine is added to the minimal salt medium at a concentration of between 0.05 and 25 g/l.

17. The method as claimed in claim 1,

wherein D,L-methionine is added to the minimal salt medium at a concentration of between 1 and 5 g/l.

18. The method as claimed in claims 1,

wherein SAM is recovered from the culture medium by centrifugation of said culture medium and by means selected from the group consisting of subsequent chromatographic purification, complexing, filtration, cross flow filtration, and precipitation of SAM.